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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,921	06/30/2000	Hiroaki Yasuda	Q58681	9683

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EXAMINER

LU, TOM Y

ART UNIT PAPER NUMBER

2621

DATE MAILED: 12/22/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/607,921

Applicant(s)

YASUDA, HIROAKI

Examiner

Tom Y Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The amendment and written response filed on August 20, 2003 has been entered.
2. Claims 9-18 have been added.
3. Claims 1-18 are pending.

***Response to Arguments***

4. Applicant's arguments filed August 20, 2003 have been fully considered but they are not persuasive.

The Ito Reference:

Applicant argues Ito's weighted averaging process is not the claimed "image output device". In addition, applicant argues since the weighted averaging process is not an image output device, the limitation of "transferring at least one original image signal, which is among the plurality of the original images, to an image output device" is not satisfied.

Upon further review of specification, and in light of applicant's arguments, the examiner agrees the weighted averaging process shown in figure 1B in Ito's reference is not the claimed "an image output device", and Ito does not teach "transferring at least one original image signal, which is among the plurality of original images, to an image output device". Nonetheless, "transferring at least one original image signal, which is among a plurality of original images, to an image output device" is well known in the art. Accordingly, new references have been cited and new grounds of rejection have been entered.

***Claim Rejections - 35 USC § 102***

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9, 11, 14 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Honda (U.S. Patent No. 5,233,989).

- a. Referring to Claim 1, Honda discloses feeding a plurality of original image signals (optical images at column 4, line 14) representing radiation image information (X-ray images, column 4, line 13), which have been fed out from an image signal input apparatus (X-ray tube, column 4, line 10), into an operation processing device (a combination of blocks 8-14 shown in figure 1 corresponds to the claimed “operation processing device”); performing predetermined operation processing on the plurality of the received original image signals in the operation processing device to obtain an operation-processed image signal (mixture signal  $S_m$  at column 4, line 57 is the claimed “an operation-processed image signal”, also see figure 1); transferring at least one original image signal, which is among the plurality of the original image signals, to an image output device (original signal  $X_i$  as shown in figure 1 is transmitted to display unit 16); performing image outputting with the image output device and in accordance with the one original image signal having been transferred (displaying on a display unit is the claimed “performing image outputting”); after the operation-processed image signal has been obtained from the predetermined operation processing, feeding the

operation-processed image signal into the image output device (mixture signal  $S_m$  is obtained after blocks 8-14); and performing image outputting with the image output device and in accordance with the received operation-processed image signal (mixture signal  $S_m$  is transmitted to the display unit 16 for displaying, see figure 1).

- b. Referring to Claim 2, Honda discloses where the operation processing device is located on the side of the image output device (see figure 1, processing blocks 8-14 are located on the side of display unit 16); the plurality of the original image signals are transferred to the operation processing device; and the operation processing is performed on the plurality of the transferred original image signals in the operation processing device (plurality of original images are processed in blocks 8-14).
- c. Referring to Claim 3, Honda discloses where the operation processing device is located on the side of the image signal input apparatus (processing blocks 8-14 are located on the side of X-ray tube 1); the operation-processed image signal, which has been obtained from the operation processing device, is transferred to the image output device; and the image outputting is performed with the image output device and in accordance with the operation-processed image signal having transferred (mixture signal  $S_m$  is transmitted and displayed on the display unit 16).
- d. With regard to Claim 4, all limitations are addressed in Claim 1.
- e. With regard to Claim 5, all limitations are addressed in Claim 2

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- f. With regard to Claim 6, all limitations are addressed in Claim 3.
- g. With regard to Claim 7, all limitations are addressed in Claim 1.
- h. With regard to Claim 8, all limitations are addressed in Claim 1.
- i. Referring to Claim 9, Honda discloses wherein the transfer device comprises a network (the link between blocks 5 to 6, 6 to 16 are the claimed transfer device, which connects the TV camera 3 all the way to the display unit 16, such connection is to be considered as a network).
- j. Referring to Claim 11, Honda discloses wherein the image signal input apparatus comprises a CR apparatus (X-ray tube 1 is a CR apparatus).
- k. With regard to Claim 14, see explanation in Claim 11.
- l. With regard to Claim 16, see explanation in Claim 9.
- m. With regard to Claim 17, see explanation in Claim 9.
- n. With regard to Claim 18, see explanation in Claim 9.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda in view of Luo et al (U.S. Patent No. 5,901,240), all the arguments and applicability in Claims 4 and 7 are incorporated herein.

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a. Referring to Claim 10, Honda discloses using X-ray tube 1 as shown in figure 1. However, Honda does not teach using a CT scanner. Luo at column 5, line 14, teaches using a CT scanner to obtain digitized X-ray images. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a CT scanner. One of ordinary skill in the art would have been motivated to do this because a CT scanner is just another means of acquiring radiation images. In addition, Luo at column 5, lines 13-15 teaches using a diagnostic scanner like CT produces an electronic x-ray image which is digitized, which eliminates the A/D converter 5 in Honda's system.

b. With regard to Claim 13, all limitations are addressed in Claim 10.

6. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda, all the arguments and applicability in Claims 4 and 8 are incorporated herein.

a. Referring to Claim 12, Honda discloses display unit 16. Even though Honda does not explicitly teach such display unit is a liquid crystal display, a person of ordinary skill in the art would be motivated to use such display because it saves space.

b. With regard to Claim 15, see explanation in Claim 12.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Doi et al, U.S. Patent No. 5,289,374, see figure 2.

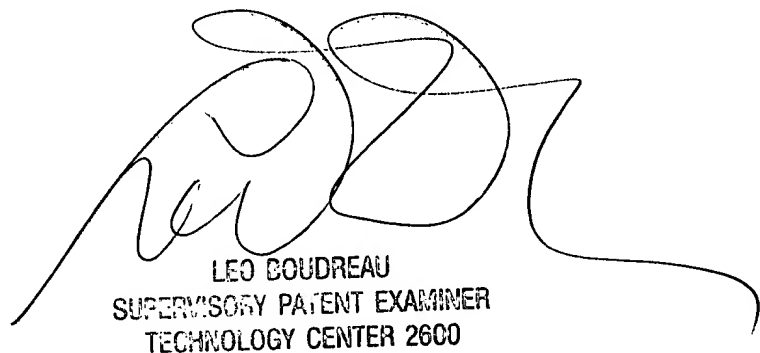
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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y Lu whose telephone number is (703) 306-4057. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Tom Y. Lu



LEO BOUDREAU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600